



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,378	01/18/2005	Frank Haase		2319

7590  
Jennifer D Adamson  
Shell Oil Company  
Intellectual Property  
PO Box 2463  
Houston, TX 77252-2463

12/11/2007

EXAMINER
----------

PRICE, CARL D

ART UNIT	PAPER NUMBER
----------	--------------

3749

MAIL DATE	DELIVERY MODE
-----------	---------------

12/11/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/521,378

Applicant(s)

HAASE, FRANK

Examiner

CARL D. PRICE

Art Unit

3749

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 12 November 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☒ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).


4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 1, 2 and 4-28.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: See Continuation Sheet.

  
CARL D. PRICE  
Primary Examiner  
Art Unit: 3749

Continuation of 3. NOTE: New issues requiring further consideration and/or search include at least consideration the scope of the invention now expressed in amended claims 11 and 28 which now stipulate the "fuel and gaseous mixture" do not have a metal based combustion improver, in place of "the combustion conditions". New issues requiring further consideration and/or search also arise from the scope of the invention now expressed in newly added claims 29 and 30 each of which depend directly from independent claims 1 and 18.

Continuation of 11. does NOT place the application in condition for allowance because: None of the prior art references referred to here teach or suggest subjecting the droplet mixture to a cool flame under evaporation conditions effective to produce an evaporated gaseous mixture comprising oxygen and hydrocarbons, the cool flame having a temperature of between 300 C and 480 C when the pressure is 1 bar. The '407 patent describes an optional preburning step, but it does not teach or suggest subjecting the mixture to a cool flame as claimed in claim 1 of the present application. The examiner disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, applicant's attention is directed to the examiner's statements made in the Final Rejection mailed on 08/13/2007 regarding obviousness of the claimed invention in view of the teachings of the prior art of record which are at least in part reproduced herein below: In regard to claims 1, 2 and 4-28, for the purpose for providing a suitable clean and environmentally friendly alternative fuel for the US004054407 (Carruba et al) heating systems, it would have been obvious to a person having ordinary skill in the art to operate heating system burners with Fischer-Tropsch fuel having additives and low aromatic and sulfur content and a density similar to that of home heating fuels (i.e. - between 0.65 and 0.8 g/cm<sup>3</sup> at 150 C), in view of the teaching of the Suppes et al or US004764266 (Chen et al). For the purpose of providing a suitable burner for combusting the room temperature liquid fuel, it would have been obvious to a person having ordinary skill in the art to evaporate liquid hydrocarbon droplets to obtaining a gaseous mixture and thereafter combust the mixture in a porous catalyst, which inherently produces an aerodynamically stabilized radiant flame, in view of the teaching of US03810732 (Koch). In regard to claims 11 and 28, Official Notice is taken that ionization type sensors are well known means for detecting flames. Therefore, in view of that which is well known and for the known purpose, it would have been obvious to a person having ordinary skill in the art to detect the flame of a heating system burner. Also, in regard to claims 11 and 28, US004054407 (Carruba et al) does not rely on a "metal based combustion improver", at least as best understood from the claims. In regard to claims 5, 6, 7, 12, 16, 17 and 21, Official Notice is taken that each of the claimed combustion heated systems (i.e. - power piston or expansion engine powered with the superheated steam (claim 5); a space heated with radiant heat, etc. are known applications for hydrocarbon fueled burners. Therefore, for the purpose applying the combustion process and system to a suitable use, it would have been obvious to a person having ordinary skill in the art to operate and arrange US004054407 (Carruba et al) in the manner set forth in applicant's claims.